

REMARKS

Claims 11 and 12 have been canceled without prejudice. Claims 1-8 and 13-50 are thus currently pending in this application. Claims 1, 13, 16, 18, 19 and 44 have been amended. No new matter has been added by these amendments. Applicant has carefully reviewed the positions presented in the Office Action and respectfully request reconsideration of the claims in view of the remarks presented below.

Claim Rejections Under 35 U.S.C. §112

Claims 11-13, 16, 18, 19 and 44 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Specifically, claims 11-13, 16, 18 and 19 were rejected for having insufficient antecedent basis for "the electrode system," while claim 44 was rejected on similar grounds with respect to "the assessment impedance and the reference impedance."

Claims 11 and 12 have been canceled. Claims 13 and 16 have been amended to depend from claim 2, which recites "an electrode system" and claims 18 and 19 have been amended to recite "an electrode system." Claim 44 was amended to recite "the assessment pressure and the reference pressure."

Claim Rejections Under 35 U.S.C. §102

Claims 1, 2 and 12 were rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,200,310 to *Ben-Haim et al.*

Ben-Haim et al. discloses an apparatus having an electrode for sensing electrical potentials in heart tissue and an additional physiological sensor, e.g., blood flow sensor, positioned adjacent the sensing electrode. These sensors provide an indication responsive to tissue treatment by receiving signals generated by the body of the subject. See abstract. The positioning of the additional sensor relative to the electrode is such that the additional sensor performs its sensing function at the heart tissue. See figure 7A, item 92 and column 9, lines 41-49 ("a blood flow sensor 92 . . . senses signals responsive to blood flow within microvasculature 94 in a vicinity of channel 88;" emphasis added) and figure 7B, items 102, 104 and column 10,

lines 1-18 ("the detector [104] may detect near-IR fluorescence of ICG injected into the patient's blood stream and conveyed thereby to microvasculature 94;" emphasis added)

Amended independent claim 1 provides a catheter with a shaft having a distal segment adapted to be positioned in a biological organ having fluid flowing through it. The distal segment has a tissue-contacting area and a fluid-contacting area that is spaced apart from the tissue-contacting area. The space between the two areas allows for the tissue-contacting area to contact the biological tissue while the fluid-contacting area contacts the fluid flowing through the organ. A pressure sensor is positioned within the tissue-contacting area to provide pressure data indicative of the pressure exerted on the distal segment at or near the pressure sensor; while a flow sensor is positioned within the fluid-contacting area to provide flow-rate data indicative of the flow rate of the fluid through the biological organ.

Ben-Haim et al. does not teach such a configuration. Accordingly, Applicant requests reconsideration of the §102 rejections of claims 1 and 2.

Applicant further submits that, in view of the central purpose of the sensors in the *Ben-Haim et al.* device, i.e., to receive signals at the treatment tissue to determine the responsiveness to treatment, there would no motivation to relocate the sensors away from the treatment tissue and into a fluid-flow area to obtain the device of claim 1.¹ Doing so, in fact, would defeat the purpose of the *Ben-Haim et al.* device.

Claim Rejections Under 35 U.S.C. §103

Claims 3-4, 11 and 17 were rejected under 35 U.S.C. §103(a) as being unpatentable over *Ben-Haim et al.* In view of the foregoing analysis of independent claim 1 in view of *Ben-Haim et al.*, Applicant believes that the rejections under §103 are rendered moot as dependent claims 3, 4 and 17 depend from an allowable independent claim.

Allowable Subject Matter

Claims 20-43 and 45-50 were allowed.

¹ Applicant notes that *Ben-Haim et al.* does disclose a sensor 66 that is remote from the tissue area. This sensor, however, is a position sensor - not a physiological sensor.

Claims 5-8, 14 and 15 were objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claims and any intervening claims. In view of the foregoing analysis of independent claim 1 in view of *Ben-Haim et al.*, Applicant believes that the objections are rendered moot as dependent claims 5-8, 14 and 15 depend from allowable base claims. Therefore, these claim have not been rewritten at this time.

Claims 13, 16, 18 and 19 were rejected under § 112 but would be allowable if rewritten to overcome the § 112 rejections and to include all limitations of their base claims and any intervening claims. As indicated above, claims 13, 16, 18 and 19 have been amended to overcome the § 112 rejections. However, in view of the foregoing analysis of independent claim 1 in view of *Ben-Haim et al.*, Applicant believes these claims depend from allowable base claims. Therefore, these claim have not been rewritten to incorporate their base claims at this time.

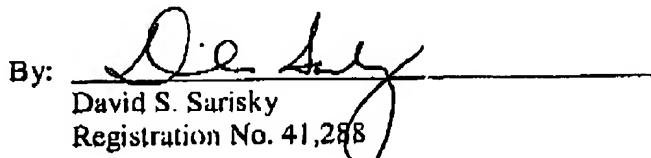
Claim 44 was rejected under § 112 but would be allowable if rewritten to overcome the rejection. As indicated above, claim 44 has been amended to overcome the § 112 rejection.

CONCLUSION

Applicant has made an earnest and bona fide effort to clarify the issues before the Examiner and to place this case in condition for allowance. Therefore, reconsideration and allowance of Applicant's claims 1-8 and 13-50 are believed to be in order and an early Notice of Allowance to this effect is earnestly solicited.

Respectfully submitted,

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